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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/750,152

12/29/2000

Hidefumi Ohsawa

35.C15035

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03/26/2004

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EXAMINER

DASTOURI, MEHRDAD

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 03/26/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,152

Applicant(s)

OHSAWA ET AL.

Examiner

Mehrdad Dastouri

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicants' amendment filed January 27, 2004, has been entered and made of record.
2. Applicants' arguments regarding Claims 1-12 have been fully considered but they are not persuasive. Applicants argue in essence that prior art of record (Shackleton et al.) fails to teach generating initial contour information by detecting a change between successive image data. The Examiner disagrees and indicates that Shackleton et al clearly disclose generation of the initial contour information by detecting a change between successive image data or successive frames (Column 11, Lines 34-67, Column 12, Lines 1-9). Shackleton et al invention is based on a composite technique of using both block motion estimation and Snake fitting (in particular, teachings of Kass et al., Snakes: "Active Contour Models"). It should be noted that Shackleton et al invention encompass claimed invention by utilizing motion estimation which is not claimed (although it is argued by the Applicants).

Claim Objections

Claim 12 is objected to because of the following informalities:

Claim 12 preamble should be rewritten to include "storage medium which stores program codes for performing the steps of...". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Shackleton et al (U.S. 5,719,951).

Regarding Claim 1, Shackleton et al disclose an image processing apparatus, comprising:

a) input means for inputting successive image data (Figure 2; Column 13, Lines 24-34);

b) detection means for detecting a change between the successive image data (Column 11, Lines 34-67, Column 12, Lines 1-9; Figures 2 and 3; Column 13, Lines 34-67, Column 14, Lines 1-3);

c) generation means for generating initial contour information for extracting an object present in the image data in accordance with an output from said detection means (Figures 2 and 3; Column 13, Lines 40-49); and

d) extraction means for extracting object image data corresponding to the object on the basis of the initial contour information generated by said generation means (Abstract; Figures 2 and 3; Column 13, Lines 50-67, Column 14, Lines 1-18).

Regarding Claim 2, Shackleton et al further disclose an apparatus according to Claim 1, further comprising coding means for coding the object image data extracted by said extraction means (Column 1, Lines 33-39; Column 2, Lines 47-52).

Regarding Claim 3, Shackleton et al further disclose an apparatus according to Claim 2, further comprising transmission means for transmitting the image data coded by said coding means (Column 2, Lines 47-52).

Regarding Claim 10, recording means for recording coded image data on a recording medium is inherently incorporated in all coding systems.

With regards to Claims 11 and 12, arguments analogous to those presented for Claim 1 are applicable to Claims 11 and 12.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shackleton et al (U.S. 5,719,951) in view of Drummond et al (Real-Time tracking of Complex Structures with On-Line Camera Calibration).

Regarding Claim 4, Shackleton et al further disclose an apparatus according to claim 1, wherein the image data input by said input means include data picked up by a video camera (Figure 2; Column 13, Lines 24-49).

Shackleton et al do not specifically disclose the input means inputs parameter data concerning a camera parameter of the video camera, and the detection means detects a change in image based on the parameter data.

Drummond et al disclose a three-dimensional model-based tracking system comprising an input means that inputs parameter data concerning a camera parameter of the video camera, and the detection means detects a change in image based on the parameter data (Abstract; Section 1, Introduction; Section 4, On-Line Camera Calibration).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Shackleton al invention according to the teachings of Drummond et al to input parameter data concerning a camera parameter of the video camera, and the detection means detects a change in image based on the parameter data because it will increase the accuracy of the system and will provide enhanced contour generation and object extraction.

Regarding Claim 5, Drmmond et al further disclose an apparatus according to Claim 4, wherein the detection means performs different detection processing in accordance with the parameter data (Abstract; Section 1, Introduction; Section 4, On-Line Camera Calibration).

Regarding Claim 6, Drmmond et al further disclose an apparatus according to claim 4, wherein said input means includes the video camera (Section 1, Introduction).

1. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shackleton et al (U.S. 5,719,951) in view of Covell et al (U.S. 6,188,776).

Shackleton et al disclose area-division means for performing area division based on motion of image data (Column 4, Lines 45-65, Snake technique). Shackleton et al

do not explicitly disclose area-division means for performing area division based on a color and texture.

Covell et al disclose a video image analysis system comprising first area-division means for performing area division based on a color and texture (Column 3, Lines 4-63), and second area-division means for performing area division based on motion of image data (Column 2, Lines 38-59), and generates the initial contour information in accordance with outputs from said first and second area-division means (Figures 5-12; Column 21, Lines 15-54; Column 22, Lines 50-67, Column 23, Lines 1-38).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Shackleton et al invention according to the teachings of Covell et al to implement further limitations of Claim 7 because it will increase the accuracy of the system and will provide enhanced contour generation and object extraction.

Regarding Claim 8, Shackleton et al further disclose an apparatus according to Claim 7, further comprising display means for displaying image data input by said input means, wherein said display means can display an extraction result of said extraction means so as to visually check the extraction result (Column 14, Lines 18-25).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shackleton et al (U.S. 5,719,951) in view of Vetro et al (6,266,443).

Shackleton et al do not explicitly disclose the coding technique utilized for coding the video image.

Vetro et al disclose an object boundary detection utilizing video coding standard MPEG-4 (ISO/IEC 14496) (Column 1, Lines 16-29).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Shackleton al invention according to the teachings of Vetro et al to utilize video coding standard MPEG-4 (ISO/IEC 14496) because it is a well known methodology routinely implemented in video coding systems.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mehrdad Dastouri
Primary Examiner
Group Art Unit 2623
March 23, 2004

**MEHRDAD DASTOURI
PRIMARY EXAMINER**

Mehrdad Dastouri